Detection of 13 possible occultation events of small transneptunian objects with the COROT space observatory

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COROT (COnvection, ROtation & planetary Transits) is a French satellite launched in 2006 and dedicated to the detection of transits by exoplanets. We re-examine the COROT asteroseismology lightcurves for the search of small transneptunian objects (TNOs). The total observation time available in this work is about 144408.3 star-hours. We analyze these fast photometry lightcurves data to search for serendipitous occultations by passing TNOs.

We have found 13 possible detections. This is the first time such large number of detection is reported. This allows us to constrain and give the size distribution of TNOs.